

## Enhanced female attractiveness with use of cosmetics and male tipping behavior in restaurants

NICOLAS GUÉGUEN and CELINE JACOB, *Université de Bretagne-Sud, IUT de Vannes, Département TC, Laboratoire CRPCC-LESTIC, 8 rue Montaigne, BP 561 - 56017 Vannes, France.*

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### Synopsis

Several studies have found that cosmetics improve female facial attractiveness when judgments are made based on photographs. However, these studies were conducted only in the laboratory, while field studies are scarce in the literature. In fact, only one study has tested the effect of cosmetics on behavior.

In this study the effect of cosmetics on tipping behavior and the link between behavior and judgment on the physical attractiveness of waitresses wearing or not wearing cosmetics were tested. A female waitress with or without makeup was instructed to act in her usual way with her patrons.

Results showed that the makeup condition was associated with a significant increase in the tipping behavior of male customers. It was also found that the effect of makeup on tipping behavior was mediated by the perception of the physical attractiveness of the waitress, but only when considering male customers.

### INTRODUCTION

The literature examining the role of cosmetics on social perception has found that, overall, makeup is associated with a positive evaluation of a woman. Graham and Jouhar (1) reported positive effects of cosmetics on judgment. Male and female participants rated color photographs of four female targets of average physical attractiveness on several traits related to appearance and personality. With facial makeup, the targets were rated as being cleaner, more tidy, more feminine, and more physically attractive, as well as being more secure, sociable, interesting, poised, confident, organized, and popular. Richetin *et al.* (2) found that women with facial makeup (as opposed to a no-makeup condition), who were presented through color photography, were associated with positive traits and high-status professions. Cox and Glick (3) examined how average-looking women were perceived after a professional make-over as opposed to being cosmetics-free and found that cosmetics were positively associated with femininity and sexiness. Workman and Johnson (4) instructed female participants to view one of three colored photographs of a professional model wearing either heavy, moderate, or no cosmetics. They found that cosmetics significantly enhanced the impression of attractiveness and femininity.

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Address all correspondence to Nicolas Guéguen at [nicolas.gueguen@univ-ubs.fr](mailto:nicolas.gueguen@univ-ubs.fr)

Cash *et al.* (5) conducted an experiment in which American college students were photographed while wearing their typical facial cosmetics and again following the removal of their makeup. Participants rated the physical attractiveness of the women. Male judgments were found to be more favorable when the women were photographed with cosmetics than when they were cosmetics-free, whereas female judgments were not affected by the presence of makeup. In a recent study, Nash *et al.* (6) presented four women's facial photographs either with or without cosmetics. Women with cosmetics were found to be perceived as healthier and more confident than when they were presented without cosmetics. Participants also awarded women who were wearing makeup greater earning potential and more prestigious jobs than the same women without cosmetics.

It seems that different levels of cosmetics use are associated with different perceptions. Mulhern *et al.* (7) asked male and female participants to view a set of five photographs of women volunteers and to rank each set from the most to the least attractive. Volunteers were made up by a beautician in five different ways: no makeup, foundation only, eye makeup only, lip makeup only, and full facial makeup (foundation, eyes, and lips). Fully made up faces were judged more attractive than the same faces makeup-free. They also found that eye makeup alone yielded higher levels of mean attractiveness ratings than foundation makeup alone, and the latter yielded higher levels of mean attractiveness ratings than only lip makeup.

Altogether, these studies show that cosmetics enhance the perception of physical attractiveness and other feminine traits of women. The intent of the present study was to explore the effect of makeup on individual behavior, as contrasted with previous research in which impression formation of facial attractiveness was evaluated in a laboratory with the help of photographs. In particular, tipping behavior was used to evaluate the impact of cosmetics on behavior. Previous research found that facial or hair adornment was associated with a greater level of tipping behavior. Stillman and Hensley (8) found that diners left larger tips for waitresses who wore a flower in their hair than they left for the same waitresses without a flower. Tidd and Lockard (9) found that a waitress exhibiting a broad smile reaped larger tips than those exhibiting a minimal smile and more from men than from women patrons. These later studies show that patrons are affected by facial or head adornment of waitresses. Thus, in such a setting, facial makeup would probably influence a patron's behavior and evaluations. Based on previous literature, we hypothesized that a waitress's makeup would increase tipping behavior, especially with men patrons. It was secondly hypothesized that this effect would be mediated by the variation in the perception of her physical attractiveness.

## METHOD

### PARTICIPANTS

One hundred and seventy-four restaurant customers (112 males and 62 females), who acted as participants, were randomly assigned to two groups. All of them were seated alone at a table in a restaurant of a medium-size city (more than 70,000 inhabitants) in a very attractive spot. The city selected was Vannes, located in the west of France on the Breton Atlantic Coast.

## PROCEDURE

A waitress (22 years old, three years of restaurant practice), regularly employed, was used to help us. She was not informed of the goals of our experiment and she did not receive any information about previous studies on the effect of cosmetics on people's perception or behavior. Precaution was taken to select a waitress who usually wore makeup herself, to help us.

The experiment was conducted each day for six weeks (excluding Saturdays and Sundays) during the lunch hour, because there was a sufficient amount of patrons who were alone at this time in the restaurant in which the experiment was carried out. Thirty observation periods were obtained (five days a week for six weeks). The two experimental conditions used were 16 lunches with makeup and 15 lunches without makeup. Another volunteer was a young female beautician, who "made up" the waitress for the duration of the experiment. In the makeup-free condition, the beautician cleaned and moisturized the face of the waitress. In the makeup condition, the beautician applied makeup to her eyes, cheeks, and lips in a way that enhanced the attractiveness of the waitress.

The confederate was instructed to act as usual. She acted in the same way in both conditions when she returned to the patron's table with a drink and the bill. Once the patron had left, the waitress returned to the table to clear it. She reported in a notebook how the client had behaved, namely, whether he/she had left a tip or not, and how much he/she had given her.

A 20-year old male, who was standing in a separate room, observed the restaurant room with the help of a video security system that previously existed in the restaurant. He was instructed to leave the restaurant through a separate exit until he saw that the patron, who was alone, stood up to leave the restaurant. The observer waited until the patron was outside and approached him/her and said, "Excuse me sir/madam, I am a student in social sciences and I am conducting a study on the judgment of individual appearance, such as physical attractiveness, apparel, and so on. Would you be willing to respond to one question about the physical appearance of somebody you have met very recently?" Once the participant agreed, which all of them did, the interviewer asked the participant to rate the physical attractiveness of the waitress with whom he had interacted in the restaurant. The evaluation was performed with a scale from 0 = low physical attractiveness to 9 = high physical attractiveness. The interviewer noted the rating of the participant, thanked him/her, and then reentered the restaurant to wait for the waitress in the kitchen, where it was not possible for the patrons to see him. When the waitress arrived, he described the participant to the waitress in order to obtain data about his/her tipping behavior. In each case, the waitress was informed about the interaction between the interviewer and the participant.

## RESULTS

In France, giving a waiter or a waitress a tip is an unusual practice as French legislation mandates that a 12% service charge is to be included in the cost of the item on the menu. Thus, in this experiment, the number of patrons who left a tip was the first dependent variable and the amount left by the patron who gave a tip was the second dependent variable. The rating of the waitress's physical attractiveness was the third variable. Data are presented in Table I.

**Table I**  
Percent of Customers Who Gave a Tip and Amount of Tip Given According to Experimental Condition and Sex of Customer

	Male patrons		Female patrons	
	Makeup	No makeup	Makeup	No makeup
	N = 58	N = 54	N = 30	N = 32
Percentages of patrons who gave a tip	55.2% (32/58)	32.2% (19/54)	33.3% (10/30)	28.1% (9/32)
Mean (SD in brackets) of amount of tip given (in euros)	1.61 (0.81)	1.12 (0.74)	1.15 (0.34)	1.00 (0.25)
Mean (SD in brackets) of rating of physical attractiveness of waitress				
Among participants who gave a tip	6.63 (0.75)	5.68 (0.74)	6.00 (0.67)	4.77 (0.67)
Among participants who did not give a tip	6.19 (0.80)	5.00 (0.77)	5.5 (0.69)	4.96 (0.71)

With the number of participants who gave a tip, a loglinear analysis of the 2 (patron gender)  $\times$  2 (experimental condition)  $\times$  2 (compliance) design was performed. A significant interaction effect between the experimental conditions and the patrons' behaviors was observed, revealing that, overall, patrons tipped the waitress while she was wearing makeup more often than when she was not wearing makeup ( $\chi^2(1, N = 174) = 4.16, p = .04, r = .15$ ). However, this significance was found only with male patrons ( $\chi^2(1, N = 112) = 4.51, p = .03, r = .20$ ), not with female patrons ( $\chi^2(1, N = 62) = 0.20, ns, r = .06$ ). Finally, a near significant main effect of gender on tipping behavior was found: male patrons gave tips more often than female patrons ( $\chi^2(1, N = 174) = 3.68, p = .06, r = .14$ ).

With the 70 patrons who gave tips, a 2 (patron gender)  $\times$  2 (experimental condition) ANOVA analysis was performed with the amount of money given as the dependent variable. A slightly main effect of the experimental condition was found ( $F(1, 66) = 3.45, p = .07, \eta^2 = .05$ ), whereas neither the effect of participant gender nor the interaction between participant gender and experimental condition was significant ( $p > .20$ ). However, when considering each group according to gender, it was found that male patrons participating in the makeup condition gave more money to the waitress than they did in the non-makeup control condition ( $t(49) = 2.34, p = .02, d = .67$ ). No significant difference was found when comparing the female patrons in the two experimental conditions ( $t(17) = 1.09, ns, d = .53$ ).

With the ratings of physical attractiveness of the waitress, a 2 (tipping behavior)  $\times$  2 (patron gender)  $\times$  2 (experimental condition) ANOVA analysis was performed. A main effect of the experimental condition was found ( $F(1, 166) = 60.77, p < .001, \eta^2 = .27$ ), revealing that the rating of physical attractiveness was higher in the makeup condition ( $M = 6.17$ ) than in the non-makeup control condition ( $M = 6.17$ ). A main effect of tipping behavior was found ( $F(1, 166) = 8.27, p < .001, \eta^2 = .05$ ): participants who had given a tip to the waitress rated her more favorably ( $M = 6.04$ ) than participants who had not given a tip ( $M = 5.38$ ). A main effect of participant gender was found ( $F(1, 166) = 20.55, p < .001, \eta^2 = .11$ ), revealing that men's ratings of physical attractiveness were higher ( $M = 5.86$ ) than women's ratings ( $M = 5.12$ ). Two-way interaction analysis revealed no significant effect ( $p > .10$  in each case), whereas the three-way interaction appeared to be near significant ( $F(1, 166) = 3.46, p = .06, \eta^2 = .02$ ).

In order to test the relation between the three independent variables, correlational analyses were performed according to participant gender and experimental condition. Results of the analyses are presented in Table II.

As we can see, the relation between the dependent variables is significant and positive only when considering men's behavior and their rating of physical attractiveness, whereas for women, most of the relations, although non-significant, went in the opposite direction.

To test whether the rating of attractiveness mediates the effect of makeup on tipping, a statistical mediation analysis (10) was performed. The results of the mediation analysis are illustrated in Figure 1.

As can be seen, makeup significantly correlated with tipping behavior ( $B = .15$ ,  $ES = .07$ ,  $t = -1.99$ ,  $p = .05$ ). It was also found that makeup was significantly related to attractiveness ratings ( $B = 1.05$ ,  $ES = .13$ ,  $t = 8.43$ ,  $p < .001$ ) and that attractiveness ratings significantly correlated with tipping ( $B = .18$ ,  $ES = .04$ ,  $t = 4.10$ ,  $p < .001$ ). When controlling the attractiveness rating, it was observed that makeup did not appear to correlate with tipping ( $B = .04$ ,  $ES = .08$ ,  $t = .47$ ,  $ns$ ), suggesting that the relation between the independent variable (make up condition) and the dependent variable (tipping behavior) was mediated by the attractiveness rating of the waitress.

The same mediation analysis was performed with the amount of tipping as the dependent variable. The results of the mediation analysis are illustrated in Figure 2.

Makeup significantly correlated with the amount of the tip ( $B = .42$ ,  $ES = .16$ ,  $t = -2.59$ ,  $p = .02$ ). Makeup was also found to significantly correlate with the attractiveness rating ( $B = 1.08$ ,  $ES = .19$ ,  $t = 5.57$ ,  $p < .001$ ) and that the attractiveness rating significantly correlated with the amount of the tip ( $B = .29$ ,  $ES = .09$ ,  $t = 3.14$ ,  $p < .01$ ). When controlling the attractiveness rating, it was shown that makeup did not correlate with the amount of tip ( $B = .12$ ,  $ES = .18$ ,  $t = .66$ ,  $ns$ ) suggesting that the relation between the independent variable (makeup condition) and the dependent variable (amount of tipping) was mediated by the attractiveness rating of the waitress.

Separate mediation analyses were performed with male and female patron data. It was found that attractiveness mediated the relation between makeup and tipping behavior only when considering male patron data both with tipping behavior and the amount of tipping. However, such a mediating effect was not found when considering female patron data, with both the two latter dependent variables considered.

**Table II**  
Bravais-Pearson Correlation Between Tipping Behavior, Amount of Tip, and Rating of the Waitress's Physical Attractiveness According to Experimental Condition and Sex of Customer

	Male patrons		Female patrons	
	Makeup	No makeup	Makeup	No makeup
Tipping/physical attractiveness	$r(56) = .27$ $p = .04$	$r(52) = .40$ $p < .005$	$r(28) = .34$ $ns$	$r(30) = -.12$ $ns$
Amount of tipping/physical attractiveness	$r(30) = .49$ $p < .005$	$r(17) = .82$ $p < .001$	$r(8) = -.49$ $ns$	$r(7) = -.38$ $ns$

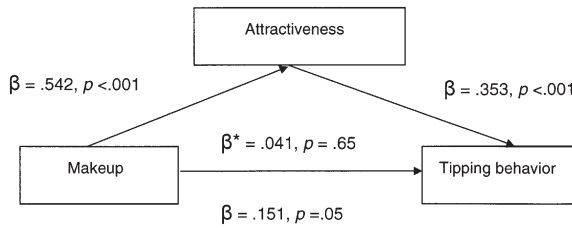


Figure 1. Mediation of the effect of makeup on tipping behavior by rating of attractiveness.

## DISCUSSION

The present findings confirm that women's makeup is associated with the behavior of men. In this study, we found that male patrons gave tips more often to a waitress who wore makeup and that when they did so, they gave her a larger amount of money. When considering the behavior of female patrons, no difference was found for both measures. However, it was found that both male and female customers rated the waitress as more attractive in the makeup condition than in the non-makeup control condition. These results confirm previous studies that found that makeup is associated with an increase in the perception of the physical attractiveness of the target (1,3,4). In these previous studies, the judgment was formed/given while evaluators were exposed to facial photographs of women wearing makeup or not. This effect remained the same when evaluators were exposed to actual facial appearance in our study. However, our results partially contradict the data of Cash *et al.* (5), who found that ratings of the physical attractiveness of women were more favorable when they were photographed with cosmetics than when they were cosmetics-free, whereas female judgments were not affected by the presence versus absence of makeup. In our experiment, both male and female customers evaluated the physical attractiveness of the waitress more positively in the makeup condition relative to the non-makeup condition. This difference is perhaps explained by the methodological difference between the two experiments: facial photographs in Cash *et al.*'s study versus live faces in our experiment. It will be interesting to evaluate this aspect in a further study in which participants will evaluate faces presented both in real life and by photographs.

The results have a theoretical interest by showing that makeup, which is traditionally associated with a higher positive impression of a target (1,3,5,6), is also associated with positive behavior toward the same target. Thus it seems that makeup not only affects physical judgment, but also affects the behavior of people who interact with a woman who is

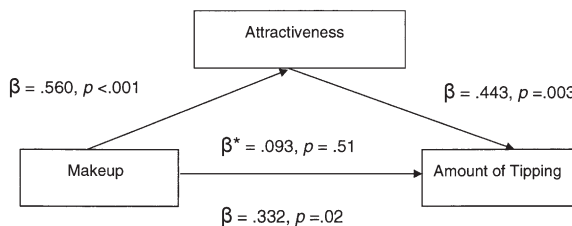


Figure 2. Mediation of the effect of makeup on amount of tipping by rating of attractiveness.



wearing cosmetics. However, this link between impression and behavior seems to be activated only with male observers. Indeed, in these previous studies on impression formation, except in Cash and *al.*'s (5), female participants were found to evaluate the physical attractiveness of women who wore cosmetics more positively. Overall, we found that the relation between makeup and tipping behavior was mediated by the rating of the physical attractiveness of the waitress. However, this effect was found only when considering the data of the male patrons, whereas it was not found when considering the data of the female patrons. The results of the mediation analysis combined with the correlational analysis seem to show that this positive effect on judgment of physical attractiveness is not associated with variation in the female patron's behavior. A positive and significant relationship was found both with compliance to tipping or the amount of tipping and the rating of physical attractiveness when considering data of the male customers. However, this relationship was not significant when considering data of female participants, and the relationships even appear negative.

Why did this difference occur in this experiment? Perhaps the effect found with male patrons is explained by a greater physical or sexual attractiveness of the waitress when she wore makeup. A recent study (11) examined the effect of cosmetics in a courtship context. Women with and without makeup were seated in two bars for one hour and the number of solicitations by men and the latency of their first solicitation were used as dependent variables. Results showed that the makeup condition was associated with a higher number of male solicitations and a shorter latency between the arrival of the women in the bar and the first courtship solicitation of a male. In our experiment, this greater physical or sexual attractiveness of the waitress could explain why the male patrons tipped more favorably because, unconsciously, they wanted to be noticed by the waitress. It will be interesting to evaluate whether tipping behavior is associated with variation in the sexual attractiveness of the waitress or the chance of dating the target. Cox and Glick (3) found that average-looking women wearing cosmetics were positively associated with sexiness. However, the relationship between sexiness and behavior toward the target was not examined, as the only evaluation made was through facial photography.

Even if this experiment was the first that examined the effect of a target's makeup on male and female behavior, this study has some methodological limitations. Only one restaurant was tested and only one waitress participated. Though care was taken to ensure that the treatment of the two experimental groups differed only in terms of presence versus absence of makeup, the experimental conditions may have also differed in other ways. The same waitress acted in the two experimental conditions. However, some factors are difficult to control, such as changes in facial expression or body language, which could have influenced her attractiveness. Cash and Cash (12) and Cash *et al.* (5) found that American female college students wearing makeup had more positive body-image cognitions and affects than when cosmetics were not worn. Perhaps this effect led our waitress to exhibit nonverbal behaviors related to such cognitions: behaviors that, in turn, led women to enhance their attractiveness to men. It would be interesting to conduct a similar experiment employing women for whom cosmetics have positive body-image cognitions versus those who do not. Another possibility is to employ the methodology of Mulhern *et al.* (7) to test the effect of different cosmetic products separately. The results cannot be generalized to cultures other than the French culture given the fact that this experiment was conducted only in France. However, the above-cited studies were conducted in the U.S.

and showed that cosmetics significantly enhanced the impression of attractiveness of females. We can then suppose that we could obtain the same behavioral results with a sample of North American males.

Finally, the behavioral results found in our experiment have some practical implications for female employees in bars or restaurants. It would be interesting for them to use facial makeup to enhance their incomes, especially in bars or restaurants where men go. However, the use of cosmetics seems to be appropriate only with masculine clientele. These results are also interesting for the cosmetics industry. Indeed, in their product design or in their ads, companies could highlight the benefit for women to wear cosmetics to work so that they are perceived more positively and to persuade women to use makeup in various professional situations. For further reading, see references (13–20).

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